THE RELATIVE EFFECTS OF PAY-FOR-PERFORMANCE PLANS ON FUTURE PERFORMANCE

A Thesis

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ABSTRACT

In the compensation literature, previous studies have indicated that pay-for-performance has a strong influence on employee performance. However, there is little research that differentiates the effects of certain forms of pay-for-performance plans on future performance. By applying the precepts of expectancy theory to specific components of the pay-for-performance plans, this study examines the relative effects associated with three different compensation plans simultaneously on future performance.

Using longitudinal data from a sample of 411 US employees from a service-related organization, I first estimated the determinants of three pay-for-performance rewards and captured differences in their reward structures. Second, I examined the impact of the three plans on future performance. In the analyses, using this two-stage procedure, the results provided mixed support for the hypotheses. As expected, I found that certain characteristics of different forms of financial rewards influenced future performance. A unit increase in permanent pay had a greater effect on future performance than a unit increase in temporal pay. In addition, I found that the compensation system with a greater link between performance and reward magnitude had a greater effect on future performance. However, the result did not support the prediction that all forms of pay-for-performance are associated with increased future job performance ratings.

This study demonstrates that the effects of pay-for-performance plans on future performance can in part be explained by their levels of expectancy and valence, as evidence by the effects observed for merit pay and long-term incentives. However, contrary to the predictions of expectancy theory, bonuses were not associated with increased future performance. Because the design of pay-for-performance plans is a critical matter for organizations, future research is needed to refine theory describing

how pay-for-performance plans operate simultaneously to affect employee performance.

BIOGRAPHICAL SKETCH

Born and raised in Seoul, Korea, Sanghee Park received her Bachelor of Arts in Psychology at Duksung Women's University in Seoul. Upon graduating, she wanted to find a way to incorporate her studies in Psychology to the Hospitality and Tourism industry. Sanghee came to the United States and attended the William F. Harrah College of Hotel Administration at the University of Nevada, Las Vegas (UNLV). She graduated from UNLV in 2002, acquiring her second Bachelors Degree in Hotel Administration, with honors. After graduating from UNLV, she returned to Korea, where she was employed by the JW Marriott Hotel Seoul and Burberry Korea for three and half years. With the knowledge that she had accumulated through her employment, she set her goals towards acquiring her Masters degree and PhD.

Sanghee returned to the United States to continue her education in Hotel Administration, majoring Human Resources Management, by pursuing an M.S. at Cornell. She will continue her studies in PhD program at Cornell.

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CHAPTER 1: INTRODUCTION

Finding effective solutions to motivate employees to perform through monetary incentives has been a primary concern of companies since the beginning of the industrial revolution (Bartol & Locke, 2000). To control the performance of employees, companies need to realize what motivates employees to work for better results (Mitchell, 1982), and it has been frequently argued that if you want to motivate high performance, you attach rewards to it (Pearce, Stevenson, & Perry, 1985). Unfortunately, while compensation theory presents many perspectives on how awards can motivate performance, the tools used to compensate individuals come in many forms, and theory does little to differentiate between the various forms and types of compensation systems. The purpose of this paper is to delve into this issue, and to consider how different forms of compensation are expected to motivate higher job performance.

There are various rewards systems designed to improve performance, such as recognition of superior achievement, promises of future promotion opportunities, and current and future financial rewards related to performance (Baker, Jensen, & Murphy, 1988). Yet even among cash awards, there can be various forms. Long-term incentives focus on performance beyond the one-year time line, whereas short-term incentives are usually connected to performance goals accomplished within a single year or a shorter time frame (Milkovich & Newman, 2005). Awards can also be one-time payments, such as bonuses (Milkovich & Newman, 2005) or permanent increases to base pay, such as merit pay (Milkovich & Newman, 2005). In short, compensation systems can have many characteristics, and it is likely they will have different effects on the potential behaviors incentivized by the plan. Understanding how the characteristics of different components of a compensation system influence individual

performance can therefore be an important step to help design compensation system to encourage the types of behaviors desired by the organization.

Many argue that financial incentives have the strongest influence on employee performance and other desired behaviors (Baker, Jensen, & Murphy, 1988; Jenkins & Gupta, 1982; Locke, Shaw, Saari, & Latham, 1981; Skaggs, Dickinson, & O'Connor, 1992). This perspective, though, is not without its detractors. Indeed, others also contend that incentive plans may not be as effective as they could be in improving employees' performance (Kohn, 1993; Pfeffer, 1998; Rich & Larson, 1984). Because incentive plans only change employees temporarily, but do not change the attitudes that motivate employee behaviors, they often fail (Kohn, 1993). This negative perspective, though, does not question the idea that incentives can motivate; rather, they question the use of pay-for-performance as an effective tool for soliciting the types of behaviors ultimately desired by an organization. As such, there is general agreement that pay-for-performance motivates behavior; the issues, however, are how pay-for-performance motivates performance, and if the outcome being rewarded actually achieves the broader goals of the organization.

In spite of these controversies, compensation practice has moved ahead with the implementation of many and varied pay-for-performance systems. Despite the significant monetary investments in compensation systems, there is little research that looks at the different effects associated with the particular components of compensation system that are simultaneously affecting employees. Until recently, there are few studies that compared the effects of merit pay and bonuses (Kahn & Sherer, 1990; Schwab & Olson, 1990). However, particularly, there is no research on the relationship between long-term incentives and employees' job performance. At the same time, there is no study contrasting long-term incentive pay with other pay-for-performance tools, such as bonuses and merit pay systems. A comparison between

long-term incentives and the other two major compensation systems need to be made. Recently, many companies are offering long-term incentives to not only executives, but also other employees. Overall, these three forms of pay-for-performance are increasingly in use by organizations (Heneman, 2005; Joseph & Kalwani, 1998; Pass, Robinson, & Ward, 2000; Peck, 1984; Schwab & Olson, 1990; Sturman & Short, 2000), and are indeed important components of total compensation.

While there are a myriad of compensation systems and tools that can be used to influence (or at least attach rewards to) employee performance, the purpose of this paper is to contrast three major forms of pay-for-performance: long-term incentives, merit pay, and bonuses. Ultimately, my goal is to answer the following research question: what is the relative effectiveness of the three financial rewards: merit pay, individual-based bonuses, and long-term incentives? By exploring each of the three financial rewards and their relative effectiveness, the results of this study will contribute theoretically and practically to understanding aspects of different pay systems to motivate employees' performance and, therefore, to designing more effective pay-for-performance plans within organizations.

To address this question, Chapter 2 focuses on expectancy theory relevant to the topic and reviews theoretical and empirical research on the theory. Chapter 3 discusses different characteristics of three different pay-for-performance plans, an application of these characteristics into the two components of the formula from expectancy theory, and hypotheses that have been developed. Methodology for testing the model is discussed in Chapter 4, and Chapter 5 provides the results of the analyses. Discussions from this study follow in Chapter 6.

CHAPTER 2: LITERATURE REVIEW

It is believed that employees are motivated to perform better when offered something they want (Green, 1992). Theoretically and practically, it is thought that affecting motivation is the most effective method of influencing performance (Green, 1992; Ilgen, Nebeker, & Pritchard, 1981; Mitchell, 1982). Therefore, the application of motivation theory may be the most fruitful means of understanding how pay-for-performance plans can influence employees' job performance.

Psychologists have proposed that motivation is a matter of choices to behave and it can be combined with ability, expectation, and effort to yield outcomes (Kanfer, 1990; Mitchell & Daniels, 2003; Vroom, 1964). Researchers have observed motivation as a psychological process, showing that individuals become motivated when there are needs or desires to fulfill and when there are specific goals to achieve (Bandura, 1986; Ford, 1992; Kanfer, 1990; Mitchell, 1982; Mitchell & Daniels, 2003; Pinder, 1998). Therefore, people achieve better results on their specific goals with higher motivation, and this higher motivation also leads to greater sustained results (Mitchell & Daniels, 2003).

The logic behind pay-for-performance compensation is that linking pay to performance can motivate individuals to achieve or sustain greater performance levels (Banker, Lee, Potter, & Srinivasan, 1996; Banker, Lee, Potter, & Srinivasan, 2001; Fein, 1976; Gerhart & Milkoich, 1990; Heneman & Werner, 2005; Lawler, 1971, 1981; Milkovich & Newman, 2005; Pearce, Stevenson, & Perry, 1985; Schwab & Olson, 1990; Turner, 2006). As a result, a number of forms of pay-for-performance plans have emerged, with different mechanisms through which performance is linked to pay and with different methods of allocating awards (Milkovich & Newman, 2005; Schwab & Olson, 1990). In general, research has repeatedly found that pay-for-

performance plans do help achieve desired results, at both the individual level (Banker, Lee, Potter, & Srinivasan, 1996; Bonner & Sprinkle, 2002; Eisenberger, Rhoades, & Cameron, 1999) and organizational level (Foulkes, 1980; Gerhart & Milkoich, 1990; Gomez-Mejia & Welbourne, 1988; Lawler, 1981; Milkovich, 1988; Milkovich & Newman, 2005). However, little work discusses how the various forms of pay-for-performance may differently affect motivation. In this paper, I argue that the characteristics of pay-for-performance plans affect motivation in different ways, and thus the application of motivation theory, specifically expectancy theory, can provide insight into how different pay-for-performance plans can influence employee performance levels.

This chapter provides a summary of previous research related to the relationships between motivation, financial rewards, and job performance to support this thesis. Specifically, I focus on expectancy theory to address the following question: what is the relative effectiveness of the three financial rewards: merit pay, individual-based bonuses, and long-term incentives?

Expectancy theory is important to compensation research because it has been useful for showing how pay plans are capable of encouraging, directing, and controlling employee behavior (Gerhart, Minkoff, & Olsen, 1995). More importantly, expectancy theory provides a mechanism for differentiating between types of pay-for-performance plans because the theory specifically speaks to how employees perceive rewards and employees' beliefs among effort, performance and outcome (Ilgen, Nebeker, & Pritchard, 1981). Above all, expectancy theory focuses on how rewards can shape employees' behavior (Gerhart, Minkoff, & Olsen, 1995). Although some have argued that the theory has methodological limitations on empirical research, I will employ more its theoretical concepts in this paper without specifically attempting to falsify or expand the theory.

In sum, as this chapter will show, expectancy theory provides a means to differentiate between different types of pay-for-performance plans. The characteristics of a pay-for-performance plan should, therefore, determine changes in job performance ratings as employees respond to the incentives of their compensation system. The rest of this chapter will be devoted to reviewing the literature on expectancy theory and to discussing its applications to the characteristics of pay-for-performance plans.

Expectancy Theory

Expectancy theory has been widely applied and has received extensive empirical support (Green, 1992; Ilgen, Nebeker, & Pritchard, 1981; Isaac, Zerbe, & Pitt, 2001; Johnson, 1991; Mitchell, 1979) among a number of theoretical approaches to job motivation (Bonner & Sprinkle, 2002; Campbell, Dunnette, Lawler, & Weick, 1970; Galbraith & Cummings, 1967; Graen, 1969; Ilgen, Nebeker, & Pritchard, 1981; Lawler, 1971; Porter & Lawler, 1968; Vroom, 1964). The theory has been popular because it forms the basis of describing and predicting job motivation and behavior that lead to future job performance (Wahba & House, 1974).

Expectancy theory, popularized by Victor H. Vroom (1964), suggests that employees make rational decisions according to their perceptions that are associated with certain outcomes and based on their subjective probability that their behavior will lead to those outcomes (Mitchell & Daniels, 2003; Wahba & House, 1974). Expectancy theory posits that motivation is a function of three beliefs: expectancy, valence, and instrumentality.

Expectancy is the subjective probability of an action or effort leading to an outcome or performance (VanEerde & Thierry, 1996; Vroom, 1964). Employee's confidence in their skills for a task, the availability of relevant information, previous

experience, and a level of self-esteem can contribute to employees' expectancy perceptions about various levels of job performance (Pinder, 1984).

Valence is defined as all possible emotional orientations toward outcomes, and it is interpreted as the importance, attractiveness, desirability, or anticipated satisfaction with outcomes (VanEerde & Thierry, 1996; Vroom, 1964). However, valence regarding work-related outcomes in this theory refers to the level of satisfaction employees expect to receive from the outcomes, not from the real value employees actually derive from them (Pinder, 1984).

Instrumentality is defined as the belief that performance will lead to rewards (Turner, 2006), and it is an outcome-outcome association. In other words, an employee subjectively assess that a given performance level will result in one or more outcomes, such as pay or promotion (Mitchell & Daniels, 2003). For example, performance-outcome instrumentality indicates the perceived relationship between one's performance and one's outcomes (Ilgen, Nebeker, & Pritchard, 1981; Vroom, 1964).

Although Vroom proposed the VEI model with three factors - Valence, Expectancy, and Instrumentality - other research has simplified the model by subsuming instrumentality into expectancy (Wahba & House, 1974) because of the ambiguity of instrumentality to interpret and operationalize (Wahba & House, 1974). Therefore, two different versions of the formula can be used to predict employees' future performance (Wahba & House, 1974). The first is VEI model that Vroom (1964) proposed.

Motivation = Valence x Expectancy x Instrumentality (1)

In this model, instrumentality is considered a factor determining the valence of first level outcomes (Wahba & House, 1974).

The second is VE model which most research has operationalized (Wahba & House, 1974), in which it is assumed that instrumentality is a component of expectancy.

Motivation = Valence x Expectancy (2)

As most research simplified the theory by subsuming instrumentality into expectancy, I will also look at the second formula in this thesis.

According to the formula, motivation created by these two factors – valence and expectancy – lead employees to choose types of behaviors and the level of effort. Therefore, expectancy theory suggest that once we find the valences and probabilities employees attach to certain outcomes, work-related behavior can (at least in part) be predicted (Wahba & House, 1974). According to the theory, performance of employees is higher when their motivation and subsequent effort are significantly higher with compensation that is based on performance because the compensation increases employees' expectation and their perceptions of outcomes (Bonner & Sprinkle, 2002; Green, 1992; Issac, Zerbe, & Pitt, 2001). Expectancy theory has also proposed that each individual with self-interest has the desire to maximize preferred outcomes to increase pleasure and avoid pain (Issac, Zerbe, & Pitt, 2001; Porter & Lawler, 1968; Vroom, 1964).

Expectancy theory primarily relies on extrinsic motivators to explain the causes of behaviors shown in the workplace (Leonard, Beauvais, & Scholl, 1999). As opposed to intrinsic motivators, where behaviors are derived as a consequence of internal forces such as enjoyment of the work itself, external rewards induce motivational states that stimulate behaviors (Issac, Zerbe, & Pitt, 2001). Specifically, the theory emphasizes that greater financial incentives, as outcomes, motivate employees because they increase employees' valence (Bonner & Sprinkle, 2002). Incentive plans can also increase employees' expectancy by linking effort,

performance, and pay (Bonner & Sprinkle, 2002). As a result, financial incentives can increase employees' effort, and the increased effort can lead directly to higher performance (Bonner & Sprinkle, 2002).

It should be noted that some research has also argued that there are limitations to expectancy theory (Mitchell & Daniels, 2003). Although much theoretical research has been conducted, empirical research has been limited because it has failed to prove the theory's validity due to various errors (Pinder, 1984). First, even though expectancy theory is based on a well-designed formula, employees do not often make decisions by formula; therefore, the theory has methodological problems (Mitchell & Daniels, 2003).

Second, it is not clear whether the theory predicts outcomes better for an individual (within individual) or for groups of individuals (across individuals) (Heneman & Werner, 2005; Mitchell & Daniels, 2003; Pinder, 1998). Some research before the mid-1970s has used data for groups (Kanfer, 1990). However, the results did not support expectancy theory because these studies did not address differences between employees in ability, differences in the level of rewards they received, or the difficulty of the jobs they performed (Pinder, 1998). In addition, one study (Mitchell, 1982) found that correlations between individuals' predicted effort and their actual effort were low - less than .30 (Kanfer, 1990). Recent research has showed that using data for individuals better predicts outcomes than for groups of individuals (Mitchell & Daniels, 2003; VanEerde & Thierry, 1996). These controversies threaten the validity of the VE model for understanding the effects of compensation systems.

Third, according to the theory, employees must both value outcomes positively and believe that their efforts will lead to the positive outcomes; however, one factor, the level of ability, has not been fully considered (Pinder, 1984). That is, a high level of effort may not lead to high performance because of a lack of ability (Pinder, 1984).

Nevertheless, others argue that employees can still choose their level of motivation because they believe that employees can enhance their ability through training and development activities (Mitchell & Daniels, 2003).

In sum, expectancy theory cannot perfectly explain motivation; nonetheless, the theory provides a useful model for comparing the motivational components of different pay-for-performance plans and also provides a tool for comparing different characteristics of different components of each pay-for-performance plan. By looking at previous empirical research below, I will give a better understanding how each component of expectancy theory - valence and expectancy - can be applied to explain the relationship between pay-for-performance and job performance.

Empirical Research

There has been abundant empirical research considering what motivates job performance (Eisenberger, Rhoades, & Cameron, 1999; Stajkovic & Luthans, 1997; Wood, Atkins, & Bright, 1999). Although there has been little work comparing the effects of different pay-for-performance plans, and although much of this empirical work was not originally designed to test expectancy theory, this research lends important insight into the utility of expectancy theory for understanding the influence of compensation systems.

Expectancy

Various studies show how the results of employees' job performance can differ by their expectancies regarding rewards. These following studies demonstrated that employees' job performance increase when employees' expectancies are higher.

A study of Eisenberger, Rhoades, & Cameron (1999)

The relationship of rewards for high performance with perceived self-determination and intrinsic motivation has been examined by Eisenberger et al. In their study, they provided an example of employees who had strong expectancies for performance and rewards increased their job performance, even though this empirical work was not planned to test expectancy theory. They conducted three studies, the first in a laboratory setting at a college, the latter two by surveys of employees' in a business setting. The first study evaluated the effects of performance-contingent reward on self-determination, perceived competence, and intrinsic motivation. The second study examined how expected reward for high performance in usual job activities affects employees' perceived autonomy and related outcomes. Finally, the third study examined the relationship between employees' performance-reward expectancies and interest in daily work activities, with this effect being greater among employees with a high desire for control. The authors found that reward for high performance increase perceived autonomy, intrinsic motivation, and related outcomes.

The study contradicted the cognitive evaluation theory which states people's expectancy for pay-for-performance decreases self-determination because a reward is a form of social control, and thus, reduces intrinsic motivation. In this study, authors viewed a reward as "freedom of action", because people can choose either to obtain the reward or not to take the reward. The result of their study has shown that performance-reward expectancy increases perceived self-determination, and that perceived self-determination positively affects mood at work. In addition, the results indicate that perceived self-determination positively mediates the relationships between expectancy of performance-reward and perceived organizational support, mood at work, and job performance.

Banker, Lee, & Potter (2001)

Banker, Lee, and Potter (2001) evaluated whether continuing increases in sales performance was due to the attraction and retention of more productive employees and/or whether it was due to individual productivity gains driven by the improvements in employee effort. The authors used data from a retail firm, and analyzed individual performance for employees of the sales team. The study found that the implementation of a performance-based incentive plan led to the attraction and retention of more productive employees and that the plan motivated these employees to continually improve their productivity.

The authors focused on agency theory to support their study in that performance based incentive pay leads to increased productivity in the long run. Their research also can support expectancy theory in that the pay-for-performance plan met employees' expectancy that their efforts would lead to the bonus pay. The company provided training sessions for employees prior to the implementation of performance-based incentive plan and empowered them to merchandise products and to make customer discount decisions. Therefore, the new bonus pay plan improved on employees' performance by stimulating employees' expectancy.

Pearce, Stevenson, & Perry (1985)

Pearce, Stevenson, and Perry (1985) found that the implementation of a performance-contingent pay program for managers had no effect on organizational performance. Therefore, they proposed that merit pay is not an effective method of improving managerial performance. In their article, the change in organizational performance was measured before and after the implementation of the merit pay system. They found that no obvious changes in performance were due to the implementation of merit pay.

However, there were some limitations on measuring performance. First of all, the study could not measure what factors might have existed before and after the implementation of merit pay because the study did not have a comparable control group. Second, although the study was measured for a long term, it could not extend back in time enough to discover the cause of performance improvement due to the lack of data when they needed to detect the origin of the trend after finding that job performance of the employees was improving before the implementation of merit pay. It could be assumed that there may be a trend in performance over the study period.

From an expectancy theory perspective, the reason the implementation of the new merit pay system was not directly related to increased performance may be attributable to low managerial expectancy because the pay system for increased productivity was not clearly explained. Flaws, such as challenges and rumors that merit pay would not be awarded to managers, even if they increased their performance, could lower the manager's expectancy of the merit pay.

Banker, Lee, Porter, & Srinivasan (1996)

Banker, Lee, Potter, & Srinivasan (1996) performed contextual analysis of performance impacts of outcome-based incentive which considered contextual factors, such as competitors and customer profiles. The intensity of the competition classified as high-end, middle and low-end faced by each retail store was measured. The customer profile is categorized into median household income, median age, the percentage of the population with college education, and the percentage of white collar workers. The research found that a positive impact of outcome-based incentives on sales, customer satisfaction, and profit increased with intensity of competition and the proportion of upscale customers. In addition, the research demonstrated how group-level variables are related to individual-level outcomes. Therefore, it allows for the

macro processes to have an impact on individuals over and above the effects of individual level variables (Roux, 2003).

The study also examined whether pay-for-performance is effective on contingent factors that are complex and difficult to measure, such as customer focused service. The results of the study demonstrated that the new bonus plan was successful because the retail company examined in this study gave employees high expectations of the rewards by explaining clearly the implementation of the bonus plan in detail in Q & A sessions. With this empirical test, the result of the study was that a pay-for-performance plan supported a customer-focused service strategy, and had a high impact on store sales, profits, and customer satisfaction.

A summary of expectancy

In this analysis, a number of studies were reviewed from an expectancy theory perspective. The review of these studies regarding the expectancies of employees for financial rewards confirms that the levels of expectancies are influential on job performance. It showed that the relationships between pay-for-performance plan and job performance can be different depending on employees' beliefs regarding the extent to which their successful performance would lead to rewards.

The results of three studies - Banker et al. (2001), Pearce et al. (1985), and Banker et al (1996) - were different even though the settings were very similar. These studies tested the effects of the implementation of pay-for-performance plans. The new pay-for-performance plans improved employees' performance when the companies delivered the concepts of the plans very clearly, thereby increasing the employees' expectancies. Overall, these studies confirm that employees' job performance increases when employees' expectancies are higher.

From the reviews of these studies, this thesis will advance the application of expectancy theory by specifying how employees' expectancy associated with various pay-for-performance plans can lead to different effects of the plans, based on the specific characteristics of these plans. The result of this study will also explain why some pay-for-performance plans fail to lead to higher performance.

In this study, I define expectancy as the belief that the subjective probability of a certain level of performance leads to large rewards. For example, if under one pay system, higher performance would lead to a reward equal to 1.5% of pay, this system would have less expectancy than a reward system where the same higher performance would lead to a reward equal to 25% of pay.

Valence

Little research shows that valence motivates employees in different ways. In the previous literature, valence was defined as the attractiveness or anticipated satisfaction with outcomes (VanEerde & Thierry, 1996; Vroom, 1964) and the level of satisfaction people expect (Pinder, 1984).

Stajkovic & Luthans (2001)

Stajkovic and Luthans (2001) examined the different effects of incentive motivators (e.g., monetary incentive, social recognition and feedback) on job performance through the organizational behavior modification model (O.B. Mod.) in field experiments. The study was aimed at finding the strongest incentive motivating performance improvement. Even though the paper found that task complexity could moderate the relationship between incentive motivators and performance (for example, feedback would have a stronger effect on work performance than money for complex tasks because employees who perform high complexity tasks usually have a high

education level which is associated with professional and managerial jobs with high pay), they confirmed that money has the strongest effects on work performance.

Money has strong incentive value. It is exchangeable for most other goods and different amounts of money correspond to different levels of performance that employees have achieved. In addition, money motivates employees because it satisfies their needs physiologically and psychologically.

The study demonstrates that money itself and therefore, different amounts of money are the strongest motivator for employees to improve their performance by stimulating employees' valence.

Kahn & Sherer (1990)

The results of Kahn & Sherer's study (1990) showed that the size of bonus pay (valence) has a significant effect on job performance. They examined the relationship between financial rewards and job performance using longitudinal data on managers. First, they found that managers in high-level positions working at corporate headquarters with low seniority are more sensitive to bonus plans. Second, the study demonstrated that bonus pay had a more significant effect on performance than merit pay. More specifically, the pay levels of the company's bonus pay had considerable impact on job performance. The authors proposed that bonuses may be effective because current performance can be reflected in bonus pay (Lowery, Petty, & Thompson, 1996), whereas there is a gap between current performance and pay increases to base pay (Schwab & Olson, 1990). In addition, the authors indicated that the flexibility of bonuses, which is not a regular payment, could be an advantage of the pay form. However, in the study, bonuses were explicitly targeted to higher-level, higher-paid managers who were high performers but merit pay was not. In addition, the difference of the size of bonuses across employees was larger than the size of merit

pay. Therefore, the merit pay plan in the company might have low valence as well as expectancy for employees. The authors simultaneously compared the quantity and aspects of rewards systems for the first time (Sturman, 2006). However, the study is only compares bonuses and merit pay.

Kahn & Sherer's study supports expectancy theory in that when the size of rewards (valence) is high, employees are more motivated. The research reflects employees' preference for a higher pay level for a job (Pinder, 1998). Higher valence leads to higher employee effort which also leads to higher future job performance.

A summary of valence

The above reviews show that pay-for-performance plans can differ by valence that employee's value and the size of their value. These results support the assumption of expectancy theory that employees have preferences among different types of outcomes, such as money, or preferences among various outcomes, such as pay level. They indicate that pay-for-performance plans can be the most effective method when employees strongly value money with a belief that they can accomplish what it takes to get money (Bartol & Locke, 1951), and when a high level of money is paid.

From the reviews of these studies, this study will advance the application of expectancy theory by redefining valence as the value employees perceived from a given monetary reward. But, to clearly differentiate valence from expectancy (which could relate to the expected size of a reward), I will consider valence from the perspective of the how much employees value each dollar or each percent of a reward. Depending on what value employees place on outcomes, effects of motivation on valence may differ.

A Summary of This Chapter

Expectancy theory and various empirical studies related to pay-for-performance plan are reviewed in this chapter. Theoretical concepts and the formula of expectancy theory provide a tool to differentiate between types of pay-for-performance plans by explaining employees' beliefs and motivation. Although various theoretical approaches of expectancy theory have been popularly used for job motivation, the theory has not been used in most empirical studies. Nevertheless, these studies were reviewed from the expectancy theory perspective, focusing on employees' expectancy and valence of financial rewards. The results of the studies reviewed above confirm expectancy theory in that employees are motivated by increased expectancy and valence of financial rewards, thereby lending to increased performance.

Propositions

Although many pay-for-performance studies have not initially applied expectancy theory, they have provided a useful basis for utilizing the theory to analyze the different effects of three major forms of pay-for-performance – merit pay, bonuses, and long-term incentives. On the basis of this literature review, I develop three propositions to clarify the general relationships between the theoretical concepts of expectancy theory and pay-for-performance plans. My hypotheses will be developed by applying these general propositions and the characteristics of three different financial rewards.

Proposition 1: pay-for-performance plans that provide greater expectancy will lead to high job performance.

Proposition 2: pay-for-performance plans that provide greater valence will lead to high job performance.

Proposition 3: pay-for-performance plans that provide greater expectancy and valence will lead to greater job performance.

CHAPTER 3: HYPOTHESES

As reviewed in the previous chapter, a number of studies have shown that pay-for-performance plans affect employees' job performance. Although not necessarily designed as tests of expectancy theory, this research indicates that employees' job performance improves when employees have higher expectancy and valence. This research thus lends support for the use of expectancy theory as a means of explaining how pay-for-performance plans affect individual performance; however, few studies have discussed how the different forms of pay-for-performance affect employees' motivation and thus, job performance. The purpose of this chapter is to apply expectancy theory and specifically the general propositions, of the theory as they relate to the particular characteristics of specific pay-for-performance plans in order to deduce the different performance effects we can expect.

This chapter specifically discusses different characteristics of three different forms of pay-for-performance – merit pay, bonuses, and long-term incentives. Using the theoretical framework of expectancy theory, I analyze how the characteristics of these different pay forms lead to certain levels of both expectancy and valence. Because different pay forms should have distinct effects on expectancy and valence, expectancy theory can, therefore, be used to create hypotheses regarding the relative effectiveness of pay-for-performance plans on employee job performance ratings.

Forms of Pay-For-Performance Plans

Merit pay

Merit pay is a form of reward in which individuals receive pay increases (i.e., raises) as a function of their individual performance ratings (Heneman, 2005). The pay

plan is usually based on an individual's performance and is assessed by an employee performance appraisal (Campbell, Champbell, & Chia, 1998; Schwab & Olson, 1990). Most importantly, merit pay permanently increases employees' base pay. Because of the specific characteristic of the pay plan, pay ranges are established across jobs or job groups (Schwab & Olson, 1990), and pay increases are by the size of the pay range (Kahn & Sherer, 1990). Sturman's study (2006) proposed that merit pay has a greater impact on employees' valence than bonus pay because merit pay is permanent. That is, comparing the valence of merit pay to bonuses, the present value of a $1 raise (permanent increase) is greater than the present value of a $1 bonus (a one-time payment). In addition, from the economic and agency theory perspective, merit pay is more desirable than bonuses because employees who are risk-averse prefer permanent pay increases (Eisenhardt, 1989; Sturman, 2006). The actual effect of merit pay, though, is still dependent on employees' expectancy. Furthermore, a bonus plan could still have greater valence if the potential size of the bonus is larger than the potential size of the merit pay (e.g., if the maximum raise of merit pay is 6 %, but a bonus could be 20 %).

Merit pay as pay-for-performance has been frequently used in organizations (Peck, 1984; Schwab & Olson, 1990). Although it can be different across industries, a number of recent surveys have demonstrated that 80 to 90 % of organizations use merit pay plans (Heneman, 2005).

Problems within the merit pay have arisen (Campbell, Champbell, & Chia, 1998; Schwab & Olson, 1990). Some researchers have been concerned that organizations often failed to link merit pay to employees' "true" performance because of measurement error associated with their performance appraisal system (Campbell, Champbell, & Chia, 1998; Schwab & Olson, 1990). In addition, the difference in merit pay between the best and the worst performer is often not large (Gomez-Mejia &

Balkin, 1989; Greeley & Ochsner, 1986). As shown in Kahn & Sherer's study (1990), if the merit pay range is too small between performers, the plan may fail to motivate higher performance. Therefore, the effectiveness of this pay-for-performance plan depends on the level of expectancy and valence of the rewards.

Bonuses

Bonus pay is a monetary reward given to employees in addition to their fixed compensation (Milkovich & Newman, 2005). This pay plan is also based on individual performance, but bonus pay dose not increase employees' base pay, and therefore is not permanent (Sturman & Short, 2000). This one-time cash reward links pay to performance because current performance can be directly reflected in bonus pay (Lawler, 1981; Lowery, Petty, & Thompson, 1996).

Bonus pay also has been widely used in organizations to motivate employees' performance (Joseph & Kalwani, 1998; Sturman & Short, 2000). A number of surveys reported that the popularity of bonus pay is increasing in organizations (Sturman & Short, 2000). Bonus pay is attractive from the company's point of view because it does not increase base pay, and thus does not increase fixed labor costs (Kahn & Sherer, 1990; Sturman & Short, 2000).

Although bonus pay is flexible, it has similar problems to merit pay (Gomez-Mejia & Balkin, 1989; Lawler, 1981). Discretionary payment sometimes fails to correctly pay for employees' true performance and the difference between performers may not be very significant (Gomez-Mejia & Balkin, 1989; Lawler, 1981). In sum, the effectiveness of the bonuses also depends on the level of expectancy and valence of the reward.

Long-term incentives

Long-term incentives are rewards linked to a firm's long-term growth as well as employee retention (Rynes & Gerhart, 2000). The length of the performance period in the pay plan is multiyear, whereas other pay plans are usually one year (Ellig, 1982). Above all, long-term incentives have been thought to align managers' and shareholders' goals by allowing top managers to benefit from improved organizational performance or firm share price increases by linking a portion of top managers' pay to firm performance (Eisenhardt, 1989). Therefore, long-term incentives typically establish earnings goals to be achieved over a multi-year period and reward individuals with cash or stocks (Rich & Larson, 1984). Commonly, companies pay long-term incentives with the goal of maximizing employee output (Mitchell, 1982). Managers are often accused of focusing on the short term and ignoring the long term and their time horizon differs from that of shareholders. Owners do have a long-term view of the firm because they expect to increase future profits (Lazear, 1998). Therefore, the pay plan can be a key factor which increases managers' performance and encourages employees to adopt other desired behaviors (Jenkins, Mitra, Gupta, & Shaw, 1998). For example, if the stock market reflects the long-term value of the firm, then tying managerial compensation to stock price will reward the manager for activities that improve long-term performance.

These incentives have been used to motivate managers, mostly top executives, which lead to higher shareholder returns (Devers, Holcomb, & Cannella, 2006). Until recently, a large number of companies offer long-term incentives in addition to the traditional annual bonuses mostly to compensate the executives of the company (Pass, Robinson, & Ward, 2000). However, many firms have recently implemented long-term incentive plans to other employees (Banker, Lee, Potter, & Srinivasan, 2001; Buchholz, 1996; Hamilton, 1999; Karr, 1999; McClain, 1998; Pfeffer, 1998;

Schlesinger & Heskett, 1991). For example, in the United States, an estimated 14.6 million employees presently have stock options in their organizations (Selvarajan, Ramamoorthy, Flood, & Rowley, 2006).

Problems of long-term incentive plans have been revealed. Although organizations pay long-term incentives to retain employees, companies often concern that some employees still tend to leave organizations after they receive them. For example, when employee stock options are exercised, the commitment and intention to stay decreases and external career intent increases because employees' attachment to their companies may decline as a result (Selvarajan, Ramamoorthy, Flood, & Rowley, 2006).

In sum, the level of expectancy and valence of the long-term incentives will change the effectiveness of the reward.

The Application of Three Different Characteristics of Pay Forms into Two Beliefs of Expectancy Theory

With different characteristics of the three financial rewards above and the expectancy theory formula, an application to predict employees' future performance can be developed. Expectancy theory suggests considering employees' beliefs regarding effort, performance, and outcomes and the value employees place on certain types of rewards and the size of rewards (Ilgen, Nebeker, & Pritchard, 1981).

Expectancy

According to expectancy theory, employees' motivation is enhanced when their expectancy is increased. Expectancy is increased when employees believe that they can achieve what it takes to earn their valued outcomes (Bartol & Locke, 1951). In addition, in this study, since as I subsumed instrumentality into expectancy, it is

assumed that expectancy will increase when employees believe that they can achieve large amount of financial rewards by their performance. In other words, employees will have higher expectancy from a reward system when it leads to higher percentages of pay.

Valence

While there is certainly debate as to how effective monetary incentives are on motivation, there is clear evidence that they can lead to increased performance (Baker, Jensen, & Murphy, 1988; Jenkins & Gupta, 1982; Locke, Feren, McCaleb, Shaw, & Denny, 1980; Locke, Shaw, Saari, & Latham, 1981; Skaggs, Dickinson, & O'Connor, 1992). Furthermore, for the purpose of comparing pay-for-performance plans, even if there are within-person differences with regard to employee perceptions of pay, characteristics of different plans should have some consistent with across-person generalizations (e.g., regardless of how a given person is motivated by money, all else equal, a larger reward should be perceived more positively than a smaller reward). Therefore, I assume that valence will increase when employees value each dollar or each percent of rewards that they received. In this paper, for the purposes of comparing the various pay-for-performance plans, I focus on whether the reward acquired by the employee is permanent (i.e., a raise), or a one-time payment (from bonus or LTI). As will be discussed further below, permanent increases should have a higher valence than one-time payments.

Hypotheses

Combined with the different characteristics of three pay-for-performance plans and the components of the formula from expectancy theory, expectancy theory

suggests that pay plans with a stronger link between pay and performance should lead to greater performance levels. Thus, I predict the following:

> H1: All forms of pay-for-performance - merit pay, bonuses, and long-term incentives - will be associated with increased future job performance rating.

More specifically, though, expectancy theory suggests that the characteristics of the compensation system should influence performance ratings, and thus the different characteristics of merit pay vs. bonuses vs. long-term incentives should lead to different relationships when the three pay-for-performance plans are considered simultaneously.

With different characteristics of the three financial rewards and the expectancy theory formula, merit pay should have a greater valence because it provides a permanent increase in pay, whereas, bonuses and long-term incentives provide single payments. That is, on a dollar per dollar basis, an equal increase in base pay is worth more than the temporary (i.e., one-time payment) associated with bonuses or long-term incentives. In other words, as explained above, the present value of a $1 raise (permanent increase) is greater than the present value of a $1 bonus (a one-time payment). Therefore,

> H2: A unit (i.e., 1%) increase in permanent pay increase will have greater effect on future performance than a unit (1%) increase in temporal pay.

Specifically, this suggests that the B coefficient (i.e., the unstandardized regression coefficient), which is the change in response per unit increase in future performance, associated with how strongly performance is related to merit pay (i.e., a permanent pay increase) should be larger than the B coefficients associated with either the relationship between performance and bonuses or the relationship between performance and long-term incentives (i.e., both one-time, and hence temporal, rewards).

A key difference between compensation plans, though, is that the magnitude associated with bonuses and/or long-term incentives can be much larger than merit increases (Milkovich & Newman, 2005). Thus, while I expected the permanent increase in merit pay to provide a greater effect on future performance than the same unit amount in other compensation forms, the magnitude of other compensation systems has the potential to have a bigger effect on future performance. Put another way, expectancy should reflect the extend to which performance is associated with larger rewards. If a one standard deviation in performance is associated with a reward that is notably larger than the magnitude of raise associated with comparable improvement in performance, then expectancy theory also suggests that the compensation system should be associated with greater job performance.

> H3: A compensation system with a stronger association between performance and reward magnitude (i.e. greater expectancy) should be associated with greater future employee performance.

This hypothesis means that if a compensation has a greater link between performance and reward magnitude (which should be expressed as a greater standardized beta coefficient between performance and reward), then, the compensation system should

likewise have a greater relationship between pay and performance, expressed as a greater standardized beta between the pay-for-performance relationship and performance ratings.

CHAPTER 4: METHODOLOGY

Sample

I used data contained in the human resource information system from a service-related business. For the analyses, data from the years 2003 and 2004 were used. Although the company had employees in other countries, I focused on employees based in the United States because they are compensated under the same rewards system.

A sample of 411 employees who had compete data on performance ratings, salary, organization tenure, gender, and percentage of three financial rewards - merit pay, bonuses, and long-term incentives, based on the salary - were collected. All employees in the sample were eligible for the three rewards although they did not necessarily receive them.

Dependent variable

To predict the relationship between financial rewards and future performance, I used 2004 performance ratings as the dependent variable. Performance ratings are measures of employees who companies evaluate based on factors such as employees' behavior, competition among departments (Milkovich & Newman, 2005). They are often used to determine the distribution of financial rewards (Landy & Farr, 1980). Performance ratings in the company in this study are based on a 4-point scale: significantly exceeds expectations, exceeds expectations, meets expectations, and below expectations. Performance ratings were transformed to indicator variables from 1 (lowest performance) to 4 (highest performance).

Independent variables

Since the goal of this study is to explain how the future performance of employees was affected by financial rewards - merit pay, bonuses, and long-term incentives – these three rewards were used as the independent variables.

All employees in the sample were eligible for receiving the three rewards, in addition to their salaries. The financial rewards were determined by grids, which the company specified for each reward. However, the grids specified ranges of rewards (i.e., a performance ratings of 4 could lead to a merit raise of 0 % to 0.0675 %), and thus, the specific relationship between pay and performance varied within the sample for each type of incentive.

The merit pay plan was based on individual performance. The raise rates of the plan were determined by specified grids. For bonus pay plan, the company set targets, which were based on the pay band of the employee at the beginning of the year. The company paid bonuses which reflected the individual's performance rating, the company's financial performance, and the judgment of the supervisor at the end of the year. Although both the merit pay and bonus pay plan were based on individual performance, allocations for these pay plans were also in part dependent on the decisions of the supervisor.

Long-term incentives were based on firm performance. In 2003 and 2004, the company distributed restricted stock units to their employees based on a grant grid that the company had set. The grid allowed for differentiations based on individual performance and criticality of employees' job position. Employees of the company were educated about the financial rewards system via intranet, written communication, and training workshops.

In this study, I examine these independent variables in terms of percentage of rewards per unit performance increase because the amount of each reward is provided on the basis of the differentiated salaries of each individual employee.

Control variables

The main goal of this study is to measure the effect of financial rewards on employees' future performance. Therefore, the previous performance (i.e., 2003) was used as a control variable to manage stable characteristics that caused employees' performance (e.g., ability, job knowledge, motivation levels, or opportunities to perform) (Sturman, 2003; Sturman, Cheramie, & Cashen, 2005) and unmeasured effects that are attributable to factors that also caused the previous performance ratings (Sturman, 2007).

Organization tenure was also used as a control variable because it could interfere with testing the main effects of the different characteristics of financial rewards on future performance (Sturman, 2003). Sturman's study (2003) found that organization tenure could capture some of non-linearity relationship with performance; more specifically, the effect of low levels of organization tenure is larger than the effect of high levels of organization tenure.

Gender differences have been considered one of important factors causing pay difference (Milkovich & Newman, 2005). Several reasons such as different treatment in performance evaluations, or specific characteristics of gender differences are possibly explained. Therefore, to eliminate these potential influences on future performance, gender was controlled in this study. Finally, 2003 salary was also controlled in this study.

Analysis

I used a technique based on Kahn & Sherer' procedures (1990) to predict the impact of three different financial rewards on the future job performance. Kahn & Sherer used a two-stage procedure for estimating the impact of financial incentives on performance. The study examined the determinants of bonus and merit pay awards in the first stage. After the first stage, they estimated the derivative of financial rewards with respect to performance of individual employees. Finally, the study measured the determinants of subsequent performance by using the estimated derivatives and other variables.

Although I used an approach based on Kahn & Sherer's procedures (1990), I developed some different equations between the first stage and the second stage to estimate the effect of performance on pay. The reason I employed this different approach is that Kahn & Sherer's approach is complex and not easily interpreted. The equations used in this study are based on actual value, divided by the percentage of individual financial reward by previous performance (i.e., 2003), whereas Kahn & Sherer's equations (1990) estimated the predicted value from the previous equation which was developed in the first stage. The new equations are simpler and more straightforward than Kahn & Sherer's equations because they provide a direct measure of how much a reward increased per point of performance. The equations show the individual employee's pay-for-performance experience for each of the different financial rewards.

First of all, to estimate the determinants of merit pay, bonuses, and long-term incentives, I used data on organization tenure, gender, 2003 salary, and 2003 performance on the resultant (same year) financial rewards (i.e., 2003). Equations were developed for estimating the determinants of the three financial rewards and capturing differences in the rewards. This stage provides an estimate of the parameters

of the financial rewards and an understanding of the pay-for-performance plans of the company.

$$Meritpay\% = \beta_0 + \beta_1(2003perf.) + \beta_1(org.tenure) + \beta_2(gender) + \beta_3(2003salary) \quad (1)$$

$$Bonuses\% = \beta_0 + \beta_1(2003perf.) + \beta_1(org.tenure) + \beta_2(gender) + \beta_3(2003salary) \quad (2)$$

$$LTIP\% = \beta_0 + \beta_1(2003perf.) + \beta_1(org.tenure) + \beta_2(gender) + \beta_3(2003salary) \quad (3)$$

Where Merit pay % = (2003 merit pay in dollars) / (2003 salary); bonuses %= (2003 bonuses in dollars) / (2003 salary); LTIP% = (2003 long-term incentives in dollars) / (2003 salary).

The equations (1), (2), and (3) explain the effect of the year's performance on the rewards received for that year and the determinants of each reward. These models explain, on average, what determines each of the financial rewards. More importantly, it shows the effects that 2003 performance has on the 2003 rewards.

The equations (4), (5), and (6) below were used to estimate the progressive effect of individual performance combined with each of financial rewards. In other words, these models explain "the sum of the effects of performance on financial rewards" (Kahn & Sherer, 1990). These equations provide an approximation of the strength of the pay-for-performance relationship for each individual employee.

$$PFPMerit \equiv \frac{(Meritpay\%)}{(2003Perf.)} \quad (4)$$

$$PFPBonuses \equiv \frac{(Bonuspay\%)}{(2003Perf.)} \quad (5)$$

$$PFPLTIP \equiv \frac{(LTIP\%)}{(2003Perf.)} \qquad (6)$$

Where PFPMerit = merit pay percentage with respect to 2003 performance; PFPBonuses = bonus pay percentage with respect to 2003 performance; PFPLTIP = long-term incentive percentage with respect to 2003 performance.

Hypotheses tests

In the second stage, I used the estimated parameters from the first stage and the PFP proxies (i.e., from equations 4, 5, and 6) along with the control variables of organization tenure, gender, 2003 salary, and 2003 performance, to predict future performance (i.e., 2004 performance), as shown in equation (7). This provides an estimate of the determinants of future performance.

$$Perf\,2004 = \beta_0 + \beta_1(PFPMerit) + \beta_2(PFPBonuses) + \beta_3(PFPLIP) + \beta_4(Gender) + \beta_5(Org.tenure) + \beta_6(2003salary) + \beta_7(2003perf.) \qquad (7)$$

The equation (7) is a reduced-form estimate because it is assumed that 2004 performance includes "previous pay variables," percentages of financial rewards (Kahn & Sherer, 1990). All of the equations will be fit using OLS regression.

CHAPTER 5: RESULTS

Summary statistics

Table 1 shows the means and standard deviations for the variables in this study.

Table 1

Summary of sample

Characteristics	**Data**		
Sample size	411		
Gender	Female: 47.20 %, Male: 51.34 %, Missing data: 1.46 %		
	Mean	**SD**	**Range**
Org. Tenure (year)	8.64	6.90	2 ~38
2003 salary ($)	102,130.71	38,361.19	30,000~255,000
2004 salary ($)	104,854.78	39,522.72	30,000~260,100
2003 merit pay %	0.022	0.015	0 ~ 0.068
2003 bonuses %	0.109	0.075	0 ~ 0.381
2003 Long-term incentive plan %	0.111	0.197	0 ~ 1.228
PFPMerit	0.0086	0.0048	0 ~ 0.02
PFPBonuses	0.0441	0.0314	0 ~ 0.182
PFPLTIP	0.0441	0.0776	0 ~ 0.532

Table 2 presents correlations for these variables. Performance for 2003 and 2004 had a significantly positive relationship ($r = .31$, $p < .01$). However, the coefficient of the relationship was lower than that found in previous research. Sturman (2005) showed that the average correlation between subjective performance ratings of highly complex jobs was .59. However, upon greater reflection, the characteristics of the dataset considered here make the observed correlation seem reasonable. This study used a 4-point scale, which is a coarse measure of performance rating that likely attenuated the relationship between 2003 and 2004 performance. Furthermore, the performance rating is a single item measure which further attenuates the relationship (Nunnally & Bernstein, 1994).

The salaries of 2003 and 2004 had a significantly negative relationship with organization tenure ($r = - .11$, $p < .05$). It appears that employees who received higher salaries were not those with longer tenure in the company. However, 2004 salary correlated strongly with the salary of the previous year (2003 salary) ($r = .9975$, $p < .0001$).

The percentages of all financial rewards were significantly related to 2003 and 2004 performance. The percentage of merit pay had a significant positive relationship with 2003 performance ($r = .67$, $p < .0001$), and a smaller but also significant relationship with 2004 performance ($r = .23$, $p < .0001$). The percentage of bonus pay percentage was significantly correlated with 2003 performance ($r = .29$, $p < .0001$), while it had a smaller but also significant relationship with 2004 performance ($r = .11$, $p < .05$). However, the percentage of long-term incentive had a roughly the same relationship with 2004 performance ($r = .18$, $p < .01$), as it did with 2003 performance ($r = .16$, $p < .01$).

The percentages of bonuses and long-term incentives had significantly positive relationships with salary, but the percentage of merit pay did not. The correlation

between the percentage of bonus pay and salary was significant for 2004 ($r = .57$, $p < .0001$); for 2003 ($r = .55$, $p < .0001$). The percentage of long-term incentives was significantly related with salary for 2004 ($r = .66$, $p < .0001$); for 2003 ($r = .65$, $p < .0001$).

Table 2 indicates that *PFPMerit* was highly correlated with 2003 performance ($r = .38$, $p < .01$), and had a smaller but also significant relationship with 2004 performance ($r = .13$, $p < .01$). In addition, *PFPMerit* was significantly correlated with the percentage of financial rewards. It had a significantly positive relationship with Merit pay percentage ($r = .90$, $p < .0001$), and smaller but also significant relationships with bonus pay percentage ($r = .33$, $p < .0001$) and long-term incentive plan percentage ($r = .14$, $p < .01$).

PFPBonuses was a positively associated with 2003 and 2004 salaries ($r = .55$, $p < .0001$). It was significantly related to three financial reward percentages. It had a significant relationship with merit pay percentage ($r = .12$, $p < .01$), bonus pay percentage ($r = .92$, $p < .0001$), long-term incentive percentage ($r = .58$, $p < .0001$). It had also a significant relationship with *PFPMerit* ($r = .24$, $p < .0001$).

PFPLTIP had significant relationships with most variables, except 2003 performance. *PFPLTIP* was significantly related to 2004 performance ($r = .14$, $p < .01$). However, it had a significant negative relationships with organization tenure ($r = -.15$, $p < .01$).

Table 2

Summary statistics

	1	2	3	4	5	6	7	8	9	10	11
1. 2004 Performance	1.00										
2. 2003 Performance	0.31***	1.00									
3. Organization tenure	0.06	0.09^{+}	1.00								
4. Log 2003 salary	0.09	-0.06	-0.11*	1.00							
5. Log 2004 salary	0.11^{+}	-0.02	-0.11*	0.998***	1.00						
6. Merit pay %	0.23***	0.67***	0.04	-0.03	0.02	1.00					
7. Bonus pay %	0.11*	0.29***	0.01	0.55***	0.57***	0.33***	1.00				
8. Long-term incentive plan %	0.18**	0.16**	-0.14**	0.65***	0.66***	0.17**	0.67***	1.00			
9. PFP Merit	0.13**	0.38***	0.03	-0.01	0.04	0.90***	0.33***	0.14**	1.00		
10. PFP Bonuses	-0.02	-0.03	0.00	0.55***	0.55***	0.12**	0.92***	0.58***	0.24***	1.00	
11. PFP LTIP	0.14**	0.03	-0.15**	0.66***	0.67***	0.08^{+}	0.63***	0.97***	0.10*	0.61***	1.00

Notes: N = 411; $^{+}$ p < .10; * p < .05; ** p < .01; *** p < .0001.

Predicting compensation levels

The estimates of the predictors of the 2003 rewards based on the 2003 performance (and control variables) are shown in Table 3. The table demonstrates the impact of variables that may affect the three types of rewards. The coefficient B serves as an approximation of expectancy in that it captures the extent to which performance leads to larger rewards. The results indicate that previous performance (i.e., 2003) was the most significant factor for the percentage of merit pay ($B = .015$, $p < .01$), bonus pay percentage ($B = .034$, $p < .01$), and long-term incentives ($B = .060$, $p < .0001$). Interestingly, gender ($B = .006$, $p < .05$) and 2003 salary ($B= .132$, $p < .0001$) also affected bonus pay percentage. For long-term incentive percentage, organization tenure was negatively significant ($B = - .003$, $p < .01$), while 2003 salary ($B = .384$, $p < .0001$) was significantly positive.

Table 3

First step regression results

(Standard errors in parentheses)

	Merit pay %	**Bonus pay %**	**Long-term Incentive %**
	B	**B**	**B**
2003 Performance	0.0152*** (0.0008)	0.0344*** (0.0041)	0.0600*** (0.010)
Org. tenure	0.0000 (0.0000)	0.0005 (0.0004)	-0.0027** (0.0010)
Gender	0.0002 (0.0006)	0.0062* (0.0030)	0.0112 (0.0076)
Log 2003 Salary	0.0007 (0.0018)	0.1318*** (0.0088)	0.3839*** (0.0219)
R-Square	0.45	0.42	0.48

Notes: N = 411; $^{+}$ p < .10; * p < .05; ** p < .01; *** p < .0001.

Impact of financial rewards

The results of the regression analyses of the second stage are presented in Table 4. The five models provide information on the impact of financial rewards on future performance. Standardized beta shows how strongly each variable is related to future performance.

After controlling for the effects of organization tenure, gender, 2003 salary, and 2003 performance, 2003 salary (B= .261, β = .142, p < .01) and 2003 performance (B= .283, β = .307, p < .01) had significant effects on 2004 performance. The results also indicate that the control variables are significantly related to future performance.

The next three models provide information on the effects of each financial reward on future performance. When *PFPMerit* was introduced into the second model (B), the effects of 2003 salary and 2003 performance remained the same as in model A. Table 4 also shows significant effects on 2003 salary and 2003 performance when *PFPBonuses* are added in model C. When *PFPLTIP* was introduced in the fourth model (D), the effect of long-term incentives on 2004 performance was significant (B=1.180, β = .157, p <.05).

Finally, when all variables are included in model E, the result indicates that the combined effects of the three financial rewards were significant for 2004 performance. PFPMerit and PFPLTIP were positively affected future performance (B for PFPMerit: 10.512, β = .079, p <.10; B for PFPLTIP: 1.816, β = .241, p <.01) However, it is noted that the effect of *PFPBonuses* negatively influenced future performance (B = -3.833, β = - .186, p < .01). Contrary to the hypotheses, the results indicate that 2004 performance decreased as employees received increased bonuses.

Table 4

Second step regression results

(Standard errors in parentheses)

	2004 Performance									
Model	**A**		**B**		**C**		**D**		**E**	
	B	β	**B**	β	**B**	β	**B**	β	**B**	β
PFP Merit	-	-	7.5168 (7.3337)	0.05	-	-	-	-	10.5124^{+} (7.5277)	0.08
PFP Bonuses	-	-	-	-	-1.4738 (1.3738)	-0.07	-	-	-3.8329** (1.5586)	-0.19
PFP LTIP	-	-	-	-	-	-	1.1796* (0.5900)	0.16	1.8158** (0.6504)	0.24
Organization Tenure	0.0038 (0.0048)	0.04	0.0037 (0.0048)	0.04	0.0042 (0.0048)	0.05	0.0051 (0.0048)	0.06	0.0067 (0.0048)	0.07
Gender	0.0535 (0.0346)	0.09	0.0552 (0.0347)	0.09	0.0556 (0.0347)	0.09	0.0489 (0.0345)	0.08	0.0546 (0.0344)	0.09
Log 2003 salary	0.2609** (0.1019)	0.14	0.2638** (0.1019)	0.14	0.3423** (0.1270)	0.19	0.0471 (0.1474)	0.03	0.1476 (0.1514)	0.08
2003 Performance	0.2830** (0.0485)	0.31	0.2687*** (0.0507)	0.29	0.2756*** (0.0490)	0.30	0.2817*** (0.0483)	0.31	0.2406** (1.7114)	0.26
R-square	0.12		0.12		0.12		0.13		0.15	

Notes: N = 411; $^{+}$ p < .10; * p < .05; ** p < .01; *** p < .0001.

CHAPTER 6: DISCUSSION

In this study, I examined the relationships between three different forms of compensation (merit pay, bonuses, and long-term incentives) and future performance by analyzing existing pay-for-performance plans in a service-related organization.

Based on the predictions of expectancy theory, I developed hypotheses that differentiated between the effects of the various pay-for-performance plans. In general, expectancy theory suggests that a compensation plan with greater expectancy and greater valence should motivate employees to perform better. This suggests that by considering the expectancy and valence of different forms of compensation (i.e., different types of pay-for-performance plans), it is possible to differentiate between the types of effects we may expect from each. Thus, the main goal of this study was to look at the different effects associated with the particular components of the compensation system that simultaneously affect employees. As a result, this study reviews the components of expectancy theory and the certain characteristics of three different financial rewards, and predicts employees' future performance by combining them.

The results of this study provided mixed support for the hypotheses, but in general, the effects associated with different pay-for-performance plans as related to future performance scores are very interesting. As expected, the results from the first stage indicates that previous performance is the most significant factor to determine financial rewards (B for merit pay percentage: .015, $p < .0001$; B for bonus pay percentage: .034, $p < .0001$; B for long-term incentive percentage: .060, $p < .0001$). In other words, performance levels in a given time period were indeed associated with the reward linked with different pay-for-performance plans in the same time period. In

addition, Table 1 shows that one point improvement of performance, on average, is associated with a 4.41 % payout of long-term incentives on base pay. However, an employee receives 0.86 % raises of merit pay on base pay by improving performance by one point. The range of long-term incentive raises in this company was 0 % to 122.75 % of salary, and an average was 11.15 %. However, the range of merit pay raises in this company was 0 % to 6.8 % of salary, and an average was 2.3 %. Indeed, it seems that the size of long-term incentive is very large. Therefore, this result shows that long-term incentives have a large expectancy because employees can expect an increase in performance to lead to a large payout. Conversely, merit pay seems to have low expectancy because an increase in performance yields a relatively raise.

The second stage of the analyses examined how the pay-for-performance plans relate to future performance. These results, however, provided mixed support for the hypotheses. I originally assumed that all forms of pay-for-performance would motivate employees to increase their performance. Cursory examination of correlations seemed to support this idea, in that the correlation between the pay-for-performance plans and future performance were all positive and significant (r for merit pay percentage: .23, $p < .0001$; r for bonus pay percentage: .11, $p < .05$; r for long-term incentive plan percentage: .18, $p < .01$).

The regression analyses, though, included more than simply the association; it controlled for the effects of prior performance, and also considered the various forms of pay-for-performance simultaneously. The intent of the analyses was to provide a clearer indication of the effect that each plan had on future performance. As predicted, PFPMerit (B = 10.51, $\beta = .079$, $p < .10$) and PFPLTIP (B = 1.82, $\beta = .24$, $p < .01$) were positively associated with future performance. However, contrary to expectation, bonuses had a significantly negative association with future performance (B = -3.83, $\beta = -.19$, $p < .01$).

The results of the second stage show that the effect associated with 1% of merit pay (B = 10.512, $p < .10$) is larger than the other rewards (B for PFPBonuses: -3.833, $p < .01$; B for PFPLTIP: 1.816, $p < .01$). Therefore, it is supportive of hypothesis 2 which predicted that permanent increases would have more valence than temporary increases.

Long-term incentives have the greatest affect on future performance (β for PFPLTIP: .24; β for PFPMerit: .078, β for PFPBonuses: - .19). The standardized beta shows the effect associated with a one standard deviation increase in the reward amount. Therefore, the results confirm hypothesis 3 because long-term incentives in this company are associated with the highest level of future performance because of its stronger link between performance and reward magnitude (larger expectancy).

Overall, the results of this study provide mixed support for expectancy theory. They showed that pay-for-performance plans with some expectancy and valence were associated with future job performance levels. However, they could not explain why bonuses are not associated with increased future performance.

Some previous empirical research has shown evidence that financial incentives sometimes do not lead to increased effort and improved performance (Bonner, Hastie, Sprinkle, & Young, 2000; Camerer & Hogarth, 1999; Guzzo, Jette, & Katzell, 1985; Jenkins, Mitra, Gupta, & Shaw, 1998; Lee, Locke, & Phan, 1997; Prendergast, 1999; Wright, 1989, 1990, 1992; Wright & Kacmar, 1995). Cognitive-evaluation theory (Deci, Betley, Kahle, Abrams, & Porac, 1981; Deci & Ryan, 1985) suggested that monetary incentives make employees focus more on the external reward related to a task, and therefore, decreasing intrinsic motivation and can decrease effort and task performance (Bonner & Sprinkle, 2002). However, financial incentives can be considered as an intrinsic reward because employees enhance their feelings of achievement or self-esteem by receiving the monetary incentive (Guzzo, 1979).

Previous research has specifically suggested that bonuses help motivate employees. Some have provided specific recommendations, such as that bonuses in pay plans should represent 5 to 10 % of base pay (Heneman, Ledford, & Gresham, 2000). The range of bonus pay raises in this company was 0 % to 40 % of salary, and the average was 10 %. However, it seems that large bonuses actually seemed to demotivate employees in this company. It is possible that this outcome may relate to "weak performance-outcome relationships" or that the company might have vague performance criteria or infrequent pay outs (Kuvaas, 2006). However, this is not consistent with my finding regarding long-term incentives. It is possible that bonuses, because they had lower expectancy than long-term incentives, higher expectancy than merit pay, lower valence than merit pay, and, higher valence than long-term incentives, being in this "middle" situation, were ineffective performance drivers. In any case, the unexpected results regarding bonuses cannot be explained by this data, and future research should look into whether this effect is unique to this dataset, or if there are more general issues at stake when employees are compensated with multiple pay-for-performance plans simultaneously.

This research has a number of advantages over previous studies on pay-for-performance. First, it used longitudinal data controlling for prior performance to examine the effects of pay-for-performance plans on future performance. Second, the study considered the different effects of certain characteristics of multiple pay-for-performance plans simultaneously. Moreover, it applied certain components of the pay-for-performance plans to the formula of the expectancy theory to predict future performance.

This study, however, is not without limitations. The longitudinal data was limited to only two years in one company in one country. To detect a causal relationship that might exist, more periods should be tested in order to make

conclusive statements (Kuvaas, 2006). In addition, this study is only based on archival data. The results were inferred from the relationship between pay and performance for expectancy and based on the characteristics of the plans for valence. While this is not the first study to examine pay-for-performance plans in this way (Kahn & Sherer, 1990), it would be valuable to more specifically assess employee perceptions of expectancy and valence of the pay-for-performance plans.

Understanding how the characteristics of compensation plans affect future performance is crucial for organizations to design competitive pay-for-performance plans. This study makes an important contribution to the literature by examining the true relationships between pay-for-performance plans and future performance and by investigating certain characteristics of pay-for-performance plans. Yet, despite these contributions, the limitations in this study provide much room for future research. Further study should be pursued to clarify the influences on future performance and how different compensation plans affect employee motivation.

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